```
Logging in to Dialog
Trying 31060000009998...Open
DIALOG INFORMATION SERVICES
PLEASE LOGON:
 *****
ENTER PASSWORD:
 *****
Welcome to DIALOG
Dialog level 05.05.00D
Last logoff: 24jun05 05:37:39
Logon file405 18jul05 11:43:57
           *** ANNOUNCEMENT ***
-- UPDATED: Important Notice to Freelance Authors--
See HELP FREELANCE for more information
NEW FILES RELEASED
***Aluminium Industry Abstracts (File 33)
***Ceramic Abstracts/World Ceramic Abstracts (File 335)
***CSA Life Sciences Abstracts (File 24)
***Corrosion Abstracts (File 46)
***Materials Business File (File 269)
***Engineered Materials Abstracts (File 293)
***CSA Aerospace & High Technology Database (File 108)
***CSA Technology Research Database (File 23)
***METADEX(r) (File 32)
***FDAnews (File 182)
***German Patents Fulltext (File 324)
RESUMED UPDATING
***Canadian Business and Current Affairs (262)
.***CorpTech (559)
Chemical Structure Searching now available in Prous Science Drugs
of the Future (F453), IMS R&D Focus (F445), Beilstein Facts (F390),
and Derwent Chemistry Resource (F355).
                   ***
     >>> Enter BEGIN HOMEBASE for Dialog Announcements <<<
            of new databases, price changes, etc.
HILIGHT set on as '*'
KWIC is set to 50.
* * *
SYSTEM: HOME
Cost is in DialUnits
Menu System II: D2 version 1.7.9 term=ASCII
                     *** DIALOG HOMEBASE(SM) Main Menu ***
 Information:
  1. Announcements (new files, reloads, etc.)
  2. Database, Rates, & Command Descriptions
  3. Help in Choosing Databases for Your Topic
      Customer Services (telephone assistance, training, seminars, etc.)
```

Connecting via Winsock to Dialog

DIALOG 7/18/2005

5. Product Descriptions

Connections:

- 6. DIALOG(R) Document Delivery
- 7. Data Star(R)
  - (c) 2003 Dialog, a Thomson business. All rights reserved.

/H = Help

/L = Logoff

/NOMENU = Command Mode

Enter an option number to view information or to connect to an online
 service. Enter a BEGIN command plus a file number to search a database
(e.g., B1 for ERIC).
? b 410

18jul05 11:43:58 User217743 Session D658.1

\$0.00 0.216 DialUnits FileHomeBase

- \$0.00 Estimated cost FileHomeBase
- \$0.00 Estimated cost this search
- \$0.00 Estimated total session cost 0.216 DialUnits

File 410:Chronolog(R) 1981-2005/Jun

(c) 2005 The Dialog Corporation

Set Items Description

--- ---- ------

? set hi ;set hi

HILIGHT set on as ''

HILIGHT set on as ''

? b 411

18jul05 11:44:06 User217743 Session D658.2

\$0.00 0.100 DialUnits File410

- \$0.00 Estimated cost File410
- \$0.03 TELNET
- \$0.03 Estimated cost this search
- \$0.03 Estimated total session cost 0.316 DialUnits

File 411:DIALINDEX(R)

DIALINDEX(R)

- (c) 2005 The Dialog Corporation
- \*\*\* DIALINDEX search results display in an abbreviated \*\*\*
- \*\*\* format unless you enter the SET DETAIL ON command. \*\*\*
- ? set files biochem
- >>> 162 is unauthorized
- >>>1 of the specified files is not available

You have 23 files in your file list.

(To see banners, use SHOW FILES command)

? s (multiple or tandem) (2n) subunits and glycoprotein() hormone?

Your SELECT statement is:

s (multiple or tandem) (2n) subunits and glycoprotein() hormone?

Items File

- 3 5: Biosis Previews(R)\_1969-2005/Jul W2
- 1 24: CSA Life Sciences Abstracts\_1966-2005/Jun
- 2 34: SciSearch(R) Cited Ref Sci\_1990-2005/Jul W2
- 2 71: ELSEVIER BIOBASE 1994-2005/Jul W2
- 3 73: EMBASE 1974-2005/Jul 15

```
156: ToxFile 1965-2005/Jul W3
               1
                   399: CA SEARCH(R) 1967-2005/UD=14304
   9 files have one or more items; file list includes 23 files.
? b 155
       18jul05 11:45:00 User217743 Session D658.3
            $2.96
                   1.116 DialUnits File411
     $2.96 Estimated cost File411
     $0.26 TELNET
     $3.22 Estimated cost this search
     $3.25 Estimated total session cost
                                            1.432 DialUnits
File 155:MEDLINE(R) 1951-2005/Jul W3
       (c) format only 2005 The Dialog Corp.
      Set Items Description
? s (multiple or tandem) (2n) subunits and glycoprotein() hormone?
          444484 MULTIPLE
           25616 TANDEM
           72387 SUBUNITS
             425 (MULTIPLE OR TANDEM) (2N) SUBUNITS
          76000 GLYCOPROTEIN
382235 HORMONE?
            2127 GLYCOPROTEIN (W) HORMONE?
               4 (MULTIPLE OR TANDEM) (2N) SUBUNITS AND
      S1
                  GLYCOPROTEIN () HORMONE?
? t s1/3,ab/all
 1/3, AB/1
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2005 The Dialog Corp. All rts. reserv.
12691043
           PMID: 10614624
  A biologically active single chain human chorionic gonadotropin analog
with altered receptor binding properties.
  Narayan P; Gray J; Puett D
  Department of Biochemistry and Molecular Biology, University of Georgia,
Athens 30602-7229, USA. narayan@bchiris.bmb.uga.edu
  Endocrinology (UNITED STATES)
                                    Jan 2000, 141
                                                        (1)
                                                               p67-71, ISSN
0013-7227
           Journal Code: 0375040
  Contract/Grant No.: DK-33973; DK; NIDDK
  Publishing Model Print
  Document type: Journal Article
  Languages: ENGLISH
  Main Citation Owner: NLM
  Record type: MEDLINE; Completed
  hCG is a heterodimer consisting of an alpha-subunit common among all
members of the glycoprotein hormone family, LH, FSH, and TSH,
        unique beta-subunit
                                 responsible for receptor specificity.
Biologically active single chain analogs of these hormones have been
engineered in which the C-terminus of the beta-subunit was fused to the
N-terminus of the alpha-subunit (N-beta-alpha-C) either with or without a
linker such as the hCGbeta C-terminal peptide (CTP). This tandem
 order of subunits was chosen based on studies suggesting that the
N-terminal region of hCGbeta and particularly the C-terminal region of the
alpha-subunit are important in receptor binding and activation. Single chain hCG (YhCG1) can, in turn, be fused to the LH receptor to yield a
```

98: General Sci Abs/Full-Text 1984-2004/Dec

155: MEDLINE(R) 1951-2005/Jul W3

2

4

hormone-receptor complex that is biologically active in transfected cells. Herein, we report the construction of a new single chain hCG analog (YhCG3) in which the C-terminus of the alpha-subunit is fused to the N-terminus of hCGbeta via a CTP (N-alpha-CTP-beta-C). Compared with YhCG1, this analog binds receptor with a 25- to 30-fold lower affinity, but, surprisingly, is capable of stimulating intracellular cAMP levels to the same extent. Furthermore, YhCG3 can be covalently linked to its receptor to produce a biologically active complex that results in elevated levels of basal cAMP in transfected cells. These results suggest that free N- and C-termini of hCGbeta and the alpha-subunit, respectively, are not essential for receptor binding and activation and that YhCG3 is in a more efficacious conformation for receptor activation than YhCG1.

1/3, AB/2

DIALOG(R) File 155: MEDLINE(R)

(c) format only 2005 The Dialog Corp. All rts. reserv.

11757687 PMID: 12014113

[Biosynthesis of a single peptide chain containing human chorionic gonadotropin beta and ovine common alpha subunits tandem]

Xie L; Li C L; Shen H; Shen Q X; Wang J

Shanghai Institute of Cell Biology, Chinese Academy of Sciences, Shanghai 200031.

Shi yan sheng wu xue bao = Journal of experimental biology (China) Mar 1998, 31 (1) p61-8, ISSN 0001-5334 Journal Code: 0413570

Publishing Model Print

Document type: Journal Article ; English Abstract

Languages: CHINESE

Main Citation Owner: NLM

Record type: MEDLINE; Completed

hCG beta-oLH alpha chimeric cDNA was constructed by using overlapping PCR to contact the codons of C-terminal end of hCG beta with the codons of N-terminal end of oLH alpha, then it was subcloned into nuclear polyhedrosis virus (Acnpv) expression vector pVL1393 to construct expression vector pVL1393-hCG beta-oLH alpha. The insect cells (Sf9) were cotransfected by the expression vector pVL1393-hCG beta-oLH alpha and BaculoGold AcNPV linearized genomic DNA, and recombinant viruses AcNPV-hCG beta-oLH alpha were screened out by plaque assay. Further the insect cells were infected by the recombinant viruses, the recombinant hCG beta-oLH alpha was purified by immunoaffinity chromatography column coupling anti-hCG beta monoclonal antibody from the conditioned media of infected cells. The results of SDS-PAGE silver staining and western blotting showed that hCG beta-oLH alpha single peptide chain had apparent molecular weights of 40.5 kD and 38.0 kD under non-reducing and reducing conditions respectively, indicating the occurrence of disulfide bonds and significant tertiary structure in the single peptide chain. From the results of competitive inhibition of 125I-hCG beta binding we can conclude that the anti-hCG beta antibody-binding activity of hCG beta-oLH alpha chimera is lower than that of native hCG, but higher than that of native hCG beta. Therefore, we assume that the hCG beta-oLH alpha chimera should have potential application as a target antigen of anti-hCG fertility regulatory vaccine.

1/3, AB/3

DIALOG(R) File 155: MEDLINE(R)

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10901912 PMID: 7892221

Biosynthesis of a biologically active single peptide chain containing the

DIALOG 7/18/2005

human common alpha and chorionic gonadotropin beta **subunits** in **tandem**.

Sugahara T; Pixley M R; Minami S; Perlas E; Ben-Menahem D; Hsueh A J; Boime I

Department of Molecular Biology and Pharmacology, Washington University School of Medicine, St. Louis, MO 63110.

Proceedings of the National Academy of Sciences of the United States of America (UNITED STATES) Mar 14 1995, 92 (6) p2041-5, ISSN 0027-8424 Journal Code: 7505876

Contract/Grant No.: N01-HD92922; HD; NICHD

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

One of the distinguishing features of the gonadotropin and thyrotropin hormone family is their heterodimeric structure, consisting of a common alpha subunit and a hormone-specific beta subunit. Subunit assembly is to the function of these hormones: The conformation of the heterodimer is essential for controlling secretion, hormone-specific posttranslational modifications, and signal transduction. To address whether alpha and beta subunits can be synthesized as one chain and also maintain biological activity, a chimera composed of the human chorionic gonadotropin (hCG) beta subunit genetically fused to the alpha subunit was The resulting polypeptide hCG molecule not only was constructed. efficiently secreted but also displayed an increased biological activity in vitro and in vivo. These data show that the alpha and hCG beta subunits encoded as a single chain retain a biologically active conformation similar to that seen in the heterodimer. This approach can be used to investigate structure-function relationships of the glycoprotein hormone that were previously not tractable because of the absolute family dependence on assembly for the biological response. Moreover, other bioactive multisubunit ligands can be engineered where the combination efficiency and specificity of heterodimers and homodimers are otherwise difficult to control.

## 1/3,AB/4

DIALOG(R) File 155: MEDLINE(R)

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07532518 PMID: 3008661

Covalent crosslinking of thyrotropin to thyroid plasma membrane receptors: subunit composition of the thyrotropin receptor.

McQuade R; Thomas C G; Nayfeh S N

Archives of biochemistry and biophysics (UNITED STATES) Apr 1986, 246 (1) p52-62, ISSN 0003-9861 Journal Code: 0372430

Contract/Grant No.: AM-23080; AM; NIADDK; CA-01915; CA; NCI

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

The subunit composition of the thyrotropin (TSH) receptor has been characterized using the bifunctional crosslinking agent, disuccinimidyl suberate (DSS), to covalently link [125I]TSH to its receptor. Purified thyroid membranes were labeled with [125I]TSH, and the hormone-receptor complex was crosslinked by incubation with 0.1 mM DSS. Analysis of this crosslinked complex by sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE) under reducing conditions indicated the presence of a specifically labeled hormone-receptor complex, corresponding to a Mr

of 68,000 +/- 3000 before correction for the relative molecular mass of TSH. When reducing agents were absent during SDS solubilization, the mobility of the band increased slightly, suggesting the presence of intramolecular disulfide bonds. The labeling of the 68,000 band was specifically inhibited by TSH, but not by other glycoprotein hormones . Specific labeling occurred only in thyroid, and not in liver or muscle plasma membranes. Protease-free immunoglobulin G, isolated from sera of patients with Graves' disease and capable of competing with TSH for binding to its receptor, inhibited the labeling of the 68,000 complex. When the hormone-receptor complex was crosslinked with higher concentrations of DSS (greater than 0.3 mM), a second specifically labeled band was observed, with a Mr of 80,000 + /-5000. This complex exhibited hormone, tissue, and immunologic specificities similar to those of the 68,000 band. Continuous sucrose density gradient analysis indicated that the intact solubilized receptor possessed a sedimentation coefficient of 10.5 S prior to correction for detergent binding. However, this value increased to 16 S when determined under conditions which took into account the change in hydrodynamic properties attributable to bound Triton X-100. These data suggest that the 80,000 and 68,000 bands represent binding components of the TSH receptor and that the receptor molecule most likely contains multiple subunits, linked by noncovalent forces. ? ds

```
Set
       Items
               Description
               (MULTIPLE OR TANDEM) (2N) SUBUNITS AND GLYCOPROTEIN () HORMONE?
S1
? d his
>>>'HIS' not recognized as set or accession number
? logoff
      18jul05 11:46:00 User217743 Session D658.4
           $1.69
                   0.497 DialUnits File155
              $0.84 4 Type(s) in Format 4 (UDF)
           $0.84 4 Types
    $2.53 Estimated cost File155
    $0.26 TELNET
    $2.79 Estimated cost this search
    $6.04 Estimated total session cost 1.930 DialUnits
```

Logoff: level 05.05.00 D 11:46:00